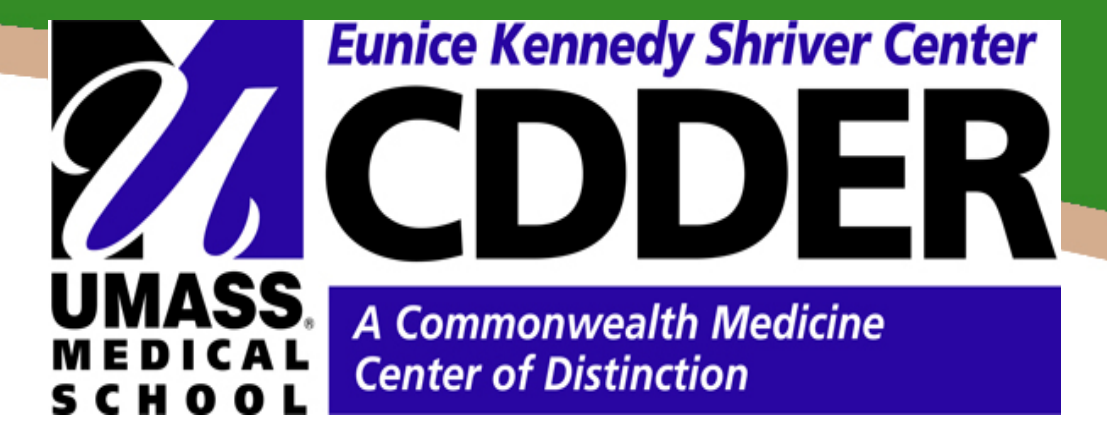


Systematic Review of Evidence of Interventions Addressing Disparities in Oral Health for Adults with Intellectual Disabilities¹: Year 2

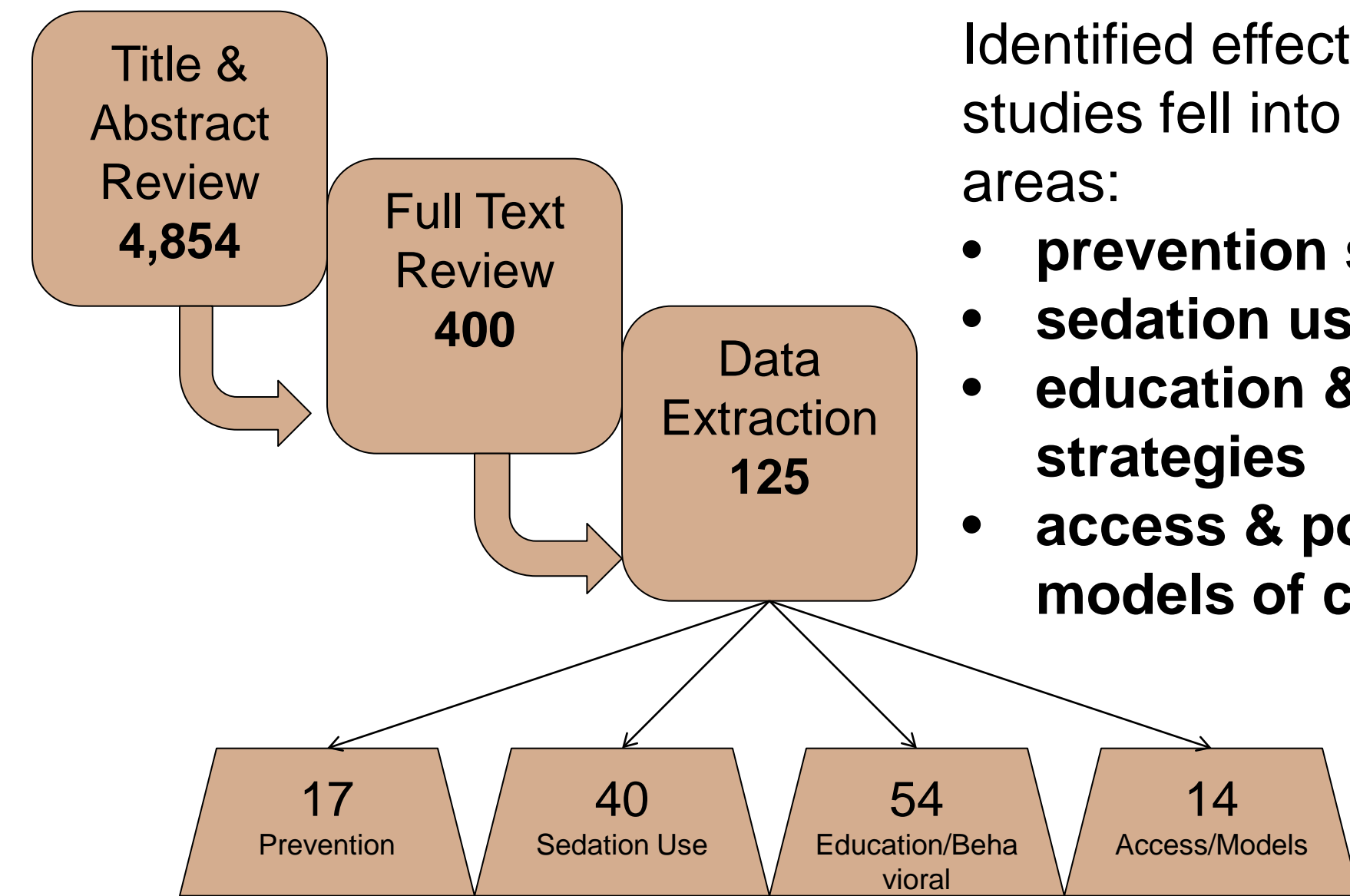
Christine J. Clifford², MHP; Alexandra Bonardi², MHA, OTR/L; Matthew Holder³, MD, MBA



Background

Oral health status and treatment for individuals with intellectual or developmental disability (I/DD) is a significant public health disparity. The population with I/DD experience poorer oral hygiene, higher prevalence and greater severity of periodontal disease, as well as a higher incidence of untreated caries. In year 1 of the systematic review, the literature was searched and screened for inclusion in the review and data extraction. The objective of year 2 of the systematic review is to examine the literature in depth.

Prisma Chart (modified)



Identified effectiveness studies fell into 4 topic areas:

- **prevention strategies**
- **sedation use**
- **education & behavioral strategies**
- **access & potential models of care.**

Intervention and Study Design Characteristics

Most Frequent Interventions by Topic:	
Sedation:	Comparison of drug types and delivery methods
Education/Behavior:	Programs directed at individuals, dental providers and dental students
Prevention:	Comparison of chlorhexidine & fluoride in a variety of forms
Access:	Economic measures, Medicaid coverage
Most Frequent Outcomes by Topic:	
Sedation:	Complications, treatment completed, recovery time
Education/Behavior:	Change in beliefs/attitudes, increased knowledge, improved oral health
Prevention:	Plaque Index, Gingival Health Index
Access:	Identified barriers to care, service utilization

- ✓ 17% of studies operationalized the definition of I/DD (defined by IQ, standardized test or diagnosis)
- ✓ 21% of the study samples were adults only, 34% were adults and children
- ✓ 35% of the studies were conducted in the United States, followed by Japan, Brazil and the UK

Methods

Key Questions

KQ 1: What effective interventions/strategies exist to improve access to oral health care for the I/DD population?
KQ2: What effect do interventions that support good oral health behaviors have on improved oral health care for the I/DD population?

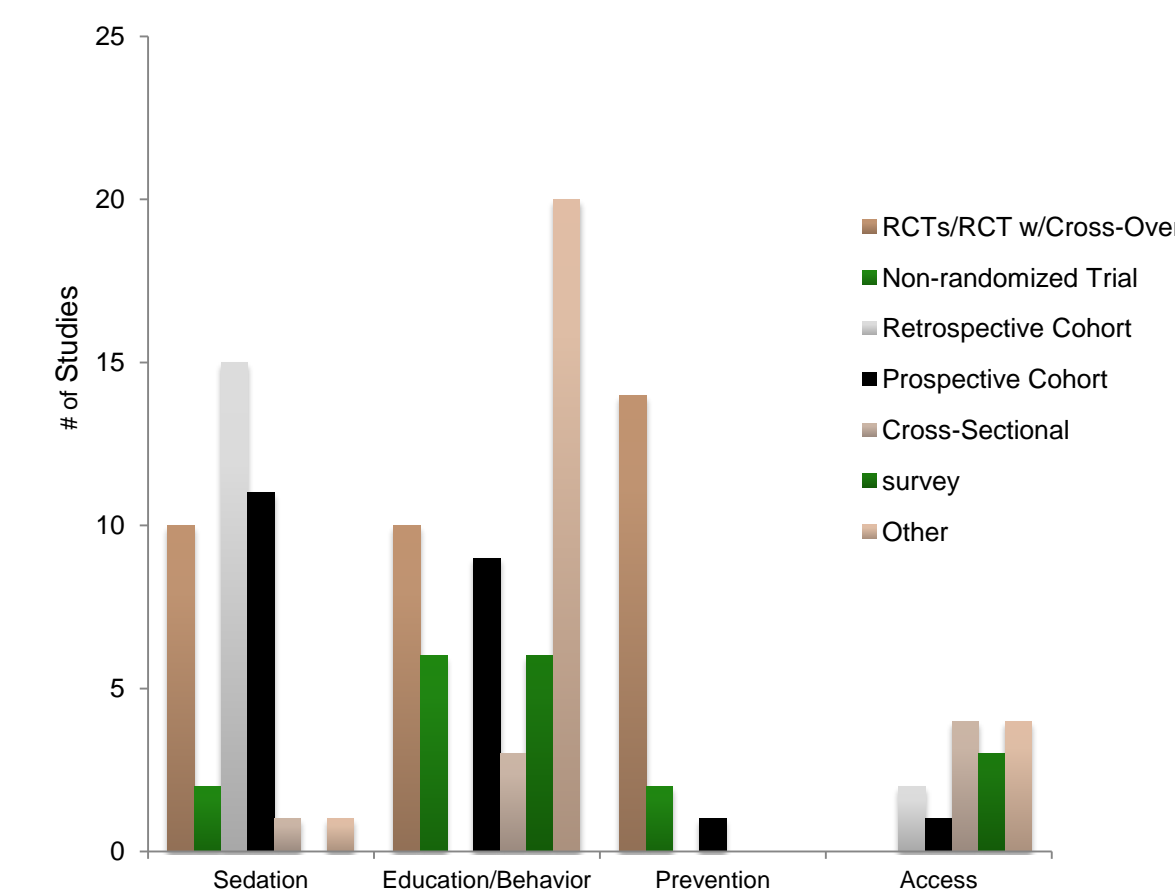
A robust search of on-line data bases such as PubMed, along with gray literature sites, was conducted. The search included any literature from 1990 to 2013 with an oral health intervention and the population of interest. Title and abstract review excluded over 4,400 articles. Full text review using PICO framework excluded an additional 275.

Data extraction was conducted using an electronic repository, the Systematic Review Data Repository (SRDR). The study team tailored the extraction tool to address specific Key Questions.

Study Quality is being assessed in a 2 phase process, examining *external* and *internal* validity: Expert clinicians conducted an assessment of the evidence with a consideration of the execution and relevance to clinical practice. Methodologists are conducting further quality review on design suitability, number of studies available, consistency of findings, effect size, and whether expert opinion was used.

Study Designs by Topic

27% of all studies were RCT/RCT w/Cross-over



Sample Size by Topic

	Range	Mean	Median
Sedation	11-1384	70.3	175
Education/Behavior	6-526	26.2	50
Prevention	8-217	51.7	37
Access	25-6400	1044.2	148

Summary

Once inclusion/exclusion criteria were applied, oral health interventions were grouped into four topic areas to facilitate review and structured extraction of data. Interventions and Outcomes varied significantly across topic areas. Less than half received a quality rating of "good" by clinical expert reviewers, emphasizing a need to build the evidence base.

¹Project funded by Centers for Disease Control & Prevention/National Center on Birth Defects & Developmental Disabilities/ Division of Human Development & Disability Cooperative Agreement # 1U01DD000914-01; ²Center for Developmental Disabilities Evaluation and Research, University of Massachusetts Medical School, Alexandra.Bonardi@umassmed.edu; ³American Academy of Developmental Medicine & Dentistry

Study Quality

Overall 46% of studies were rated as "good."

Quality review was based on a series of questions relating to study and sample design, proper measurement, validity of variables, data analysis, bias and relevance to clinical practice.

Quality Rating by Topic

